## **Abstract**

- In a reactor for the catalytic oxidation of ammonia to form nitrogen oxides which has a noble metal gauze catalyst and a heat exchanger in that order in the direction of flow, a catalyst for the decomposition of N<sub>2</sub>O is located between the noble metal gauze catalyst and the heat exchanger.
- In a process for the catalytic decomposition of N<sub>2</sub>O in a gas mixture obtained in the preparation of nitric acid by catalytic oxidation of ammonia, where the N<sub>2</sub>O is decomposed catalytically over a catalyst for the decomposition of N<sub>2</sub>O, the hot gas mixture obtained from the catalytic oxidation of ammonia is brought into contact with the catalyst for the decomposition of N<sub>2</sub>O prior to subsequent cooling.